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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/586,603 | 07/20/2006 | Appukuttan Nair Sreekumaran | P-8924-US | 5956 |
| 49443 7590 07/20/2010 Pearl Cohen Zedek Latzer, LLP 1500 Broadway 12th Floor New York, NY 10036 | | | | |
| EXAMINER | | | | |
| SAVAGE, MATTHEW O | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 1797 | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/586,603

Applicant(s)

SREEKUMARAN ET AL.

Examiner

Matthew O. Savage

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-9 is/are pending in the application.
- 4a) Of the above claim(s) 5 and 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4, and 7-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

A shift from the absorbent to a method of preparing the adsorbent will be permitted as discussed during the interview conducted on 3-4-10. Accordingly, claim 5 to the device decontaminating water and claim 6 to the method of decontaminating water have been withdrawn from consideration as being directed to non-elected inventions.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 4, and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,322,628 to Yan in view of the paper "The Formation of Colloidal Gold" by Turkevitch et al..

With respect to claim 1, Yan discloses loading gold (see from line 65 of col. 5 to line 2 of col. 6) on alumina (see line 59-61 of col. 3), the gold obviously being in the form of nanoparticles since it is applied to the alumina using a similar process in which a porous substrate is impregnated with a gold salt solution containing a reducing agent and subsequently heated (see lines 43-57 of col. 6). Yan fails to specify the steps of diluting chloroauric acid in water, heating, adding a sodium citrate solution, and heating to produce gold nanoparticles, however, Turkevitch et al teach that such a technique is known in the art (see page 670, first column). Turkevitch et al teach that such a process does not require heating beyond the boiling point of the gold nanoparticle solution. It

would have been obvious to have modified the process of Yan so as to have included the steps of preparing the gold nanoparticles as suggested by Turkevitch et al in order to eliminate the step of subsequently heating the loaded substrate beyond the boiling point of the gold nanoparticle containing solution. Yan fails to specify impregnating activated alumina particles, however, such a modification would have been obvious in order to provide a substrate having an increased surface area for accepting the gold nanoparticles resulting in an increased adsorption capacity of the adsorbent.

Concerning claim 3, Yan fails to specify activated alumina in powder form, however, such a material is well known in the art and would obviously be employed in order to optimize the surface area per unit volume of the adsorbent for a particular application.

As to claim 4, Yan discloses using activated carbon as a porous substrate. Yan fails to specify baking, however, such a modification would have been obvious in order to remove the water from loaded substrate after the loading/impregnation step.

Concerning claim 7, Turkevitch et al disclose heating the solution until it turns wine red for gold (see page 670, first column).

As to claim 8, Turkevitch et al disclose boiling (see page 670, first column).

Regarding claim 9, Yan fails to specify baking at 120 degrees C, however, such a modification would have been obvious in order to optimize the rate of removal of water from the adsorbent for a particular application.

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew O. Savage whose telephone number is (571) 272-1146. The examiner can normally be reached on Monday-Friday, 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew O Savage/
Primary Examiner
Art Unit 1797

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